Occurrence of Albino *Gazella bennetti* in Viratra mata Oran (Sacred land) of Chohtan, Barmer (Thar Desert of Rajasthan) India

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Abstract— *The study carried out at the Viratra mata oran, Dhok (Chohtan) village of the Barmer district and this study is completely based on the observation and interview of the local people for occurrence of albino Indian Gazelle locally called Chinkara at the study site. The Indian Gazelle is considered an endangered species by the International Union for Conservation of Nature (IUCN). In this Paper we describe the occurrence of Albino Indian Gazelle in this region (Viratra mata oran, Dhok village of the Barmer district). This area is located west site of the Barmer near by the Pakistan border. General eco-behavior of this animal is noted which are similar to the normal Indian Gazelle.*

Keywords— Albino, Chinkara, Gazella bennetti, Oran, Threats.

I. INTRODUCTION

The Indian *Gazelle* or commonly known as Chinkara belongs to family Bovidae, order Cetartiodactyla of Mammalia class. Indian *Gazelles* are characterized by yellowish pale white marking and red colored fur on ventral side. Facial markings of the *Gazelles* are well developed with dark brown and black fore head. They have light face covering by dark stripes at both side of the head and a nose spot. Fur color of *Gazelles* varies seasonally. Indian *Gazelles* are a dark grayish sandy color in the winter. The fur is darker brown in the summer,.

Horns of the Indian *Gazelle* are straight with prominent rings and tips that are slightly out-curved. Males and females both have horns although they are relatively shorter in females. Female's horns are usually half of the length of male and thinner in width in comparison to male horns and have less prominent rings.

Generally Indian *Gazelle* reach 0.9 to 1.2 meter in length and 0.6 to 0.8 meter in height. Fully grown Indian *Gazelle* weight 20 to 25 kg. Comparatively Females tend to weigh less than males and it can be as much as 10 cm shorter in height. (Groves, 1993; Jerdon, 1874).

Indian *Gazelles* are polygamous and have polygynandrous system for matting. They feed by grazing mostly in desert plants, grasses, crops, legumes and fruits. Crotolaria burhia (Bui), *Ziziphus nummularia* (Ber), *Prosopis cinreria* (Khejri), *Tecomella undulate* (Rohida) and *Lesiurus scindicus* (Sevan) are common grazing preference plant in desert for chinkara.

Like another wild animal, Indian *Gazelles* have a close relationship with humans as part of biodiversity, as objects of beauty as pest and wonder, as food and good indicator of environmental health. In present scenario due to increase in the human population, human beings change their mode and method of farming for fulfills of food requirements and *Gazelles* enters in their farms for grazing and some time killed by villagers. For increase the productivity of crop farmers use various types of chemical fertilizers, they spread poisonous and dangerous pesticides on crops for save crops from pests. All these chemical substances are affecting the life of wild animals, insects as well as birds in different manner that's why these are the major threats to animals. Anthropogenic pressure habitat distruction, electrocutions, accidents and natural predators like feral dogs (*Canis lupus*), Jackals (*Canis aureus*), Wolves (*Canis lupus pallipes*) and human are major threats to biodiversity and wild life (*Homo sapiens*) (Rajpurohit and Chena Ram, 2011).

II. MATERIAL AND METHODS

Barmer is the part of the Great Indian Desert and situated in western part of the Rajasthan. The Viratra mata oran, Dhok village has 1859 hectors area and located between altitude 234 m, latitude 25º 27' to 48.2N and longitude 71º 01' to 34.4E. This area is covered by sand dunes and hills.

The climate of this area is very hot and dry with maximum temperatures ranges 45ºC to 52ºC in May/June and in winter it drops minimum around 0ºC in December/January. This area receives 90% of its exiguous rainfall (average 277 mm) during the monsoon in July-September. ("District profile Barmer")

The sand dunes as well as hills have enormous floral diversity in these areas. Common natural floral diversity are xerophytes plants including *Acacia Senegal, Prosopis cineraria, Caparis deciduas, Prosopis juliflora, Salvodora persica, Salvodora oleiodis , Ziziphus nummularia, Caparis deciduas, Tecomela undulate, Calligonum polygonoides* and *Euphorbia caducifolia*.

This type of fluctuable environmental conditions has led the different types of habitat for *Gazella bennetti* around Barmer. Study was carried out at Viratra mata oran, Dhok village in Barmer regions. During field work visual observation, photography and information also gathered from the local inhabitants of this area.

III. OBSERVATION AND DISCUSSION

On 27th September 2015, I was coming from Viratra mata oran, Dhok about 53 km, west to Barmer.

I was there for my field work and exploring that area for faunal as well as floral diversity. At about 10:30 am I saw an animal like *Gazelles* grazing in the sacred land (Oran), when I looked it carefully it was Albino *Gazelles.* I tried to take photos and it's very hard to go near, I take 3-4 photos of albino *Gazelles* from 20 meter distance. There was only color difference between normal and albino *Gazelles*. I also gathered information about albino *Gazelles* from the local inhabitants by taking their interviews.

PHOTO- 1& 2 ALBINO GAZELLE GRAZING.

3.1 GPS location

GPS location of Indian *Gazelles* was noted using Google map.

25.4687614 N

71.0262935 E

3.2 What is albinism?

Albinism is primarily an integumentary or epidermal coloration condition and epidermal-derived features in humans and animals, which is due to a lack of melanin pigment. Albinism is mainly best recognized by abnormal coloration of the skin, hair, feathers, scales, and eyes (Hiller, 1983).

Melanin is made through a complex chain of chemical reaction that occurs in a specialized cell called melanocyte. Because is a complex process, many factor can alter the production of melanin in melanocyte. The most critical factor in the process is the presence of a special enzyme Tyrosinase without it melanin cannot be made.

Animals inherit genes from their parents. Mammals have special gene that determines the presence of tyrosinase in cells. If an animal is born with altered or damaged tyrosinase gene instead of a normal or whole one, melanin cannot be reliably made. The animal will become an albino. (Binkley, 2001)

Sage (1962) point up that albinism can also be due to shock, diet, senility, disease and injury. Acevedo et al. (2009) suggested another reason for albinism in animals were a genetic hereditary deficiency involving the metabolism during antenatal development and changes in melenocyte development altering the topical distribution and density of pigmentation across the body or along individual hairs.

3.3 Conservation status and Hazards

Gazelles or Chinkara declared as state wild animal in 1981. In present scenario there is declination in population , to conserve the *Gazelles* IUCN Red data book lists Chinkara or Gazelles as Endangered species in 2011 (Mathur, 2015)

The major threats to Indian *Gazelles* in these study region are killing for meat, drought condition and lack of water, natural predators like feral dog, use of poisonous chemical as pesticide for prevent crop damage by many insects, use of chemical fertilizers by farmers in farms, habitat destruction many anthropogenic reasons.

Development of this area like fencing, fragmentation of habitat by roads, accidental death by vehicle and tourism of this area are the hazards for *Gazelles* as well as biodiversity.Natural reasons thunder storm, lightening, and heavy rain are also decreased the population of wild life.

The reason behind the declination were also assessed and found that habitat loss is the major attribute, where as poaching and predation by feral dogs near village complex were also contributing significantly. Attempts for the restoration of habitat and declaration of a network of community as well as conservation areas with legal notification under wildlife (Protection) Act,1972 is a urgent requisite for long term conservation of the Chinkara- The state animals of Rajasthan. (Dookia, 2007)

IV. CONCLUSION

Biodiversity coming under the great pressure from various facets of development, Population kept on increasing, civilization, urbanization and industrialization. The very important to existence of life on the planet is the protection of biodiversity. The new finding of species Albino *Gazella bennetti* in oran present a new way for protection of wildlife in other landscape and it is need of the time to make environmental awareness, greater public participation and also it is duty of the people to protect, preserve biodiversity.

AUTHOR'S CONTRIBUTIONS

The study has been carried out under the supervision of Dr. Parihar. The literature collection, establishment of Methodology, preparation of questionnaires, interviews of local people, photography of field and conductance of survey carried out by the Mr. Khagendra Kumar.

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